treated was 2,575 for fondaparinux and 2,688 for enoxaparin. Over 65% of total costs were attributed to the invasive treatment (PCI and revascularization). Drug costs (in-hospital therapies) accounted for 10% (fondaparinux) and 12% (enoxaparin) of total costs. The estimated rates of cardiovascular events were 7.3% and 9.0% for fondaparinux and enoxaparin, respectively. Results kept unchanged on days 30 and 180 post-NSTE-ACS. Sensitivity analysis confirmed base-case results. **CONCLUSIONS:** Fondaparinux was dominant over enoxaparin (lower costs, better long-term benefits). The budget impact after 5 years of anticoagulant substitution (at 20% constant adoption rate per year) could reach 90 million BRL in savings for the Brazilian MoH and healthcare system.

PCV48

COST-EFFECTIVENESS ANALYSIS OF ANTIARRHYTHMIC THERAPIES FOR THE TREATMENT OF SUPRAVENTRICULAR TACHYCARDIA AND SURGICALLY INDUCED TACHYCARDIAS AND HYPERTENSION

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OBJECTIVES: The objective of this analysis was to estimate the cost effectiveness of commonly used antiarrhythmic agents for the treatment of supraventricular tachycardia (SVT) and intraoperative/ postoperative tachycardia and hypertension. **METHODS:** A decision tree model was built to examine the cost effectiveness of esmolol, metoprolol, diltiazem and amiodarone for the treatment of SVT and intraoperative and postoperative tachycardia and hypertension from a hospital perspective. The default pharmacy costs in the model were based on publicly available wholesale acquisition costs (WAC). Literature based values were used for the rates and medical costs of adverse cardiac events including myocardial infarction, stroke, hypotension, bradycardia, and ischemia. The primary efficacy parameter, rate of successful heart rate control, was based on literature values. The outcome was the cost per successful heart rate control with incremental cost effectiveness ratios (ICERs) calculated. No discounting was applied due to the short time frame of the analysis. For the probabilistic sensitivity analysis, a Monte Carlo simulation consisting of 1,000 simulations was conducted to test the joint uncertainty of all modeling parameters simultaneously. **RESULTS:** The total cost of therapy was $1,250.82, $2,630.19, $2,280.21, and $1,555.14 for esmolol, metoprolol, diltiazem and amiodarone, respectively. The rate of successful heart rate control was 90% (esmolol), 64% (metoprolol), 90% (diltiazem) and 74% (amiodarone). The cost per successful heart rate control was $1,389.80 (esmolol), $4,109.67 (metoprolol), $2,533.57 (diltiazem), and $2,101.54 (amiodarone). The ICER of esmolol dominated metoprolol, diltiazem and amiodarone. In the probabilistic sensitivity analysis, esmolol was the most cost-effective antiarrhythmic in 99.6% of simulations. One-way sensitivity analyses showed the model was most sensitive to the cost of hypotension and bradycardia. **CONCLUSIONS:** In this model, esmolol was the least costly and most effective antiarrhythmic. Esmolol is cost-effective in comparison with metoprolol, diltiazem and amiodarone for the treatment of SVT and intraoperative/ postoperative tachycardia and hypertension.

PCV49

COST-EFFECTIVENESS ANALYSIS OF RIVAROXABAN VERSUS DABIGATRAN AND ENOXAPARIN FOR THE PREVENTION OF VENOUS THROMBOEMBOLISM AFTER TOTAL KNEE REPLACEMENT

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OBJECTIVES: Patients after major orthopedic surgery on the joints of the lower extremities require an effective thromboprophylaxis to prevent deep vein thrombosis (DVT) and pulmonary embolism (PE). Objective of this study was to evaluate the cost-effectiveness of rivaroxaban compared with dabigatran and enoxaparin for the prophylaxis of venous thromboembolism in patients undergoing elective total knee replacement (TKR) in the context of Russian health care system. **METHODS:** A decision-tree model on the choice of regimens for thromboprophylaxis after TKR was adopted from the model, developed by McCullagh et. al. (2009). Primary outcomes was mortality, occurrence of distal and proximal DVT, rates of symptomatic PE. Incidence of gastrointestinal bleeding, stroke and death was also included into the model. Delphi method was used to determine typical practice and cost of management of DVT and PE. It was assumed that patients with DVT were treated for 90 days, patients with PE – for 180 days. All patients in the model receive thromboprophylaxis with one of the following regimens: rivaroxaban dose of 10 mg/day orally for 10-14 days (RECORD 3); dabigatran dose of 220 mg/day orally for 12-15 days (RE-MODEL); enoxaparin dose of 40 mg/day subcutaneously for 10-14 days (RE-MODEL). Incremental cost-effectiveness ratios (ICERs) were calculated. Analyses was made from state health care point of view. **RESULTS:** The cost of prophylaxis with rivaroxaban was 5621 USD (dominant technology), with enoxaparin - 5657 USD, with dabigatran - 5763 USD. Rivaroxaban has more effectiveness in preventing DVT (0.096 vs. 0.36 vs. 0.36) and PE (0.00 vs. 0.001 vs. 0.00) than enoxaparin and dabigatran correspondingly. **CONCLUSIONS:** Results of modeling have shown that rivaroxaban is dominant technology for prevention of venous thromboembolism after total knee replacement comparing to enoxaparin and dabigatran in the scope of Russian health care system.

PCV50

COST-EFFECTIVENESS ANALYSIS COMPARING DABIGATRAN AND ADJUSTED-DOSE WARFARIN FOR STROKE PREVENTION IN ATRIAL FIBRILLATION

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OBJECTIVES: Atrial fibrillation has been estimated to affect as many as 2.3 million Americans, making it the second most common cardiovascular condition in the United States. Atrial fibrillation has been found to increase patient's risk of stroke by 5-fold. We sought to calculate the projected total treatment costs, quality-adjusted survival and cost-effectiveness of dabigatran and adjusted-dose warfarin for stroke prevention in patients with atrial fibrillation. **METHODS:** This three-state Markov transition model (healthy with atrial fibrillation, disability, and death) simulated the treatment costs, quality-adjusted survival and cost-effectiveness of dabigatran 150 mg twice daily and adjusted-dose warfarin (international normalized ratio of 2-3) for stroke prevention in atrial fibrillation. Our base-case consisted of a hypothetical cohort of ≥65 year old patients with atrial fibrillation, a moderate risk of stroke ($CHADS_2 \geq 1$) and no contraindications to anticoagulation therapy. The parameters used in the model were adopted from the literature research, Cost-effectiveness was calculated over a patient's lifetime and using a societal perspective (excluding indirect costs). One-way and threshold sensitivity analyses were performed on all relevant variables. **RESULTS:** The mean quality-adjusted life expectancy of simulated patients was 12.9 and 12.2 years for those receiving dabigatran and warfarin. Total lifetime treatment costs were $146,649 and $118,904. The incremental cost-effectiveness ratio was $40,580. Upon one-way sensitivity analysis, our conclusions were found to be sensitive to changes in dabigatran cost and the differential efficacy of the two strategies. Threshold sensitivity analysis further revealed that daily dabigatran costs greater than $13 per day and differential efficacy between the two strategies of less than 0.15% per year resulted in incremental cost-effectiveness ratios greater than $50,000 per quality-adjusted life year gained. **CONCLUSIONS:** Our analysis suggested that dabigatran is cost-effective for stroke prevention in atrial fibrillation; however, this conclusion was sensitive to changes in dabigatran costs and the antithrombotic efficacy of the two treatment strategies.

PCV51

THE VALUE OF ATORVASTATIN OVER THE PRODUCT LIFE CYCLE

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OBJECTIVES: The cost-effectiveness of a drug is often evaluated at a single point in time, yet costs, effects, or relevant comparators may change over the product life cycle. This study models the cost-effectiveness of atorvastatin from product launch in 1997 through 2011 and into the future. **METHODS:** We model the yearly cost-effectiveness of atorvastatin compared to its major competitor simvastatin from 1997 to 2030 from a US payer point of view. Key events include the entry of generic simvastatin in June 2006 and the expected entry of generic atorvastatin in November 2011. Estimates for incremental costs (in USD) and effects (in QALYs) for primary and secondary prevention of cardiovascular events are taken from previous literature and adjusted for drug price changes over time. Total statin use estimates are derived from NHANES. Sensitivity analysis examines variation in study parameters including drug prices, indication use, and discount rates. **RESULTS:** Assuming increasing statin use over time (with a mean of 1m new users per year) and a 3% discount rate, the cumulative incremental cost-effectiveness ratio (ICER) for atorvastatin vs. simvastatin ranges from cost saving at release to a maximum of $45,066 per QALY after six years of generic simvastatin in 2012. Over the full modeled life cycle (1997-2030), the cumulative ICER of atorvastatin is $20,331 per QALY. Results were similar in sensitivity analysis. **CONCLUSIONS:** The ICER of atorvastatin varies across the product life cycle, rising during the period between generic simvastatin entry and generic atorvastatin entry, and declining afterwards. Over its life cycle, atorvastatin is associated with a cumulative ICER of $20,331 per QALY, with a maximum of $45,066 per QALY.

PCV52

COST-EFFECTIVNESS STUDY OF CITICOLINE IN PATIENTS WITH ACUTE ISCHEMIC STROKE IN RUSSIA

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OBJECTIVES: Cerebrovascular diseases are on the second place among all causes of death in Russia. Neuroprotective therapy is one of the main approaches of therapy in patients with acute ischemic stroke in Russia despite the absence of this group of medicines in the recommendations of national standard of care in stroke (GOST R 200). The objective of this research was to evaluate cost-effectiveness ratio for the use of citicolin (a neuroprotective agent widely used in some EU countries, South Korea, Russia and some other countries) in patients treated according to the national standard of care in stroke (GOST R 200). **METHODS:** The data on the efficacy of citicolin in patients with acute ischemic stroke were extracted from pooling analysis of clinical trials "Oral citicolin in acute stroke" (Davalos A. et al., 2002) The clinical effect was measured as global recovery index (proportion of patients with full recovery during 3 months). Cost of treatment with citicolin and cost-effectiveness ratio (CER) were calculated from the point of view of the Russian state health care system. **RESULTS:** According to the results of the above mentioned pooling analysis, the use of citicoline in stroke patients was associated with significantly greater rate of recovery than placebo (OR,1.33; 95% CI, 1.10 to 1.62). Costs of treatment of acute ischemic stroke according to recommendations of the national standard plus citicolin was 1 715.5 USD per 3 months. Costs of the treatment without citicolin was 1 289 USD per 3 months. CER (i.e. direct costs per one fully recovery patient) treated with citicolin and placebo were 6 354 USD and 6 384 USD respectively. Incremental CER was 6 264 USD. **CONCLUSIONS:** According to the applied model a treatment, citicolin appeared to demonstrate its clinically efficacy and cost-effectiveness in treatment of the patients with acute ischemic stroke, compared to placebo.